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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,519	11/26/2003	David O. Sanders	Sanders-Cont	9224

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EXAMINER	
BRUNSMAN, DAVID M	
ART UNIT	PAPER NUMBER
1755	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/723,519	SANDERS, DAVID O.	
	Examiner	Art Unit	
	David M. Brunsman	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-68 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-68 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 20040818,20031126.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-13 and 20-68 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 and 12-16 of U.S. Patent No. 6656287. Although the conflicting claims are not identical, they are not patentably distinct from each other.

The patent sets forth the state of the prior art prior to its filing at column 1, line 15 through column 5, line 48. Claim 16 of the patent most closely resembles instant claim 1 and forms the basis for the double patenting rejection made.

Instant claim 1 fully encompasses patent claim 16 in that claim 16 includes every limitation of instant claim 1 and recites separating the mixture of gases containing the dissolved material from the juice.

Column 1, line 34 of the patent teaches the prior art recognizes juice may be removed from plant material by diffusion or milling. It would have been obvious to one of ordinary skill in the art to remove juice from plant materials using milling or diffusion as in instant claims 2 and 3 because the prior art teaches such methods are the generally accepted manner in which it is done.

Column 1, line 20 of the patent and patented claim 12 teach that sugar beets, sugar cane and sweet sorghum are known plant sources for sugar. It would have been obvious to

one of ordinary skill in the art to use any of these as in instant claim 4 because one would expect them to yield significant amounts of sugar.

Patented claims 13-15 teach removal of non-sugar impurities including volatile organic acids including oxalic acid, carbon dioxide and sulfur dioxide from juice in the step of reducing dissolved gases in the juice. It would have been obvious to one of ordinary skill in the art to remove such substances as in instant claims 9-12 in the process of patent claim 16 because the patented claims teach they can and should be removed in the purification of juice. The patent disclosure relied upon to support the patented claims only identifies atmospheric gases as the mixture of gases used. Instant claim 13 relies upon the same disclosure and the limitation therein is anticipated by the patent claims.

The limitations of instant claims 20-26 are anticipated by the similar recitations of patent claims 3-9, respectively.

Claim 14 of the patent teaches the step of reducing dissolved gases (non-sucrose substances) in the method includes reducing acids in the juice. The reduction of acid in the juice implicitly includes reduction of the hydronium ions formed when dissolved in water, the ability to generate those hydronium as part of the definition of an acid, the increase in pH that is defined by a decrease in the concentration of hydronium ions and, the resulting decrease in base needed, as recited in instant claims 27, 28, 29, 32, 33, 40 and 43. The specific ranges of claim 29 would inherently result from removal of the acid components from juices obtained from sugar cane or sugar beet. Column 3, line 46 of the patent discloses that the prior art sugar juices should be adjusted to a pH of 11.5 to 11.8 to bring non-sucrose impurities to their isoelectric point to assist in their removal. It would have been obvious to one of ordinary skill in the art to adjust the initial pH of the juice to that of instant claims 30 or 31 because the prior art teaches a preferred range of pH that falls within those recited.

Column 3, line 35 of the patent discloses that the prior art teaches screening the juice first obtained from the plant material to reduce the amount of insoluble or suspended material. It would have been obvious to one of ordinary skill in the art to remove at least a portion of the insoluble material as in instant claim 34 because the prior art teaches it reduces the amount of non-sucrose impurities.

Patent claim 1 teaches that after the reduction of non-sucrose impurities, as by the gas stripping process steps c-g of claim 16, the juice should be prelimed, cold main limed, hot main limed, carbonated (treated with carbon dioxide) wherein calcium carbonate is precipitated to trap and remove non-sucrose impurities, intermediate limed carbonated (treated with carbon dioxide) wherein calcium carbonate is precipitated to trap and remove non-sucrose impurities again and then crystallized to obtain crystalline sugar. It would have been obvious to one of ordinary skill in the art to perform the rest of these steps on the juice product of claim 16 because the patent shows a purified, crystalline sugar would be obtained. Column 4, lines 6-9 of the patent disclose that the prior art teaches that liming steps in sugar processing may be performed with calcium oxide, calcium hydroxide or milk of lime. It would have been obvious to one of ordinary skill in the art to select calcium oxide, calcium hydroxide or milk of lime for the liming step as in instant claim 47 because the prior art teaches that they are known for that use.

Claims 14-19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 and 12-16 of U.S. Patent No. 6656287, as applied above in view of Perry et al.

The difference between the instant claims 14-19 and those of the patent is the manner in which the surface area of the gas/juice interface is increased. The instant claims recite: agitating, spraying, sparging, injecting the gas and gas stripping. Page 14-2 of Perry et al teaches that volatile components can be removed from a liquid using a gas in a

process known as gas stripping. The gas and liquid may be contacted in a stirred tank (agitating), in a spray tower, by introducing gas into a plate tower (sparging) and introducing gas into a packed tower (injecting the gas). It would have been obvious to one of ordinary skill in the art to use any of these methods because Perry et al teach they are effective for removing volatiles from liquids.

In accordance with 37 CFR 1.121, the form of the preliminary amendment filed is accepted even those more than 5 characters are deleted from claims 26 and 47 by use of double brackets in that the use of strikethough may not have been easily perceived.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Brunsman whose telephone number is 571-272-1365. The examiner can normally be reached on M, W, F, Sa; 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David M Brunsman
Primary Examiner
Art Unit 1755

DMB